

1 CLAIMS

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3 [001] A circuit configuration for the transmission of data
4 signals from and/or to household appliances between a first
5 transceiver device and a second transceiver device via an AC
6 power supply line system within a transmission frequency
7 range which lies above the frequency of the AC power supply,
8 wherein the respective transceiver is connected to a filter
9 arrangement at the AC power supply line system, characterized
10 in that the respective filter arrangement (FI) containing a
11 power supply low-pass filter (FI) which is arranged in the
12 input circuit of the power supply unit (PS) of the associated
13 transceiver device (MO) and is provided with an impedance
14 curve such that the impedance (Z_{fi}) thereof in said
15 transmission frequency range has a value that is at least
16 twice as high as the impedance (Z_n) of the AC power supply
17 line system (PL) in said transmission frequency range.

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19 [002] The circuit configuration according to claim 1,
20 characterized in that in an AC power supply line system (PL)
21 comprising at least one current-carrying line conductor (LN)
22 and an ground conductor (NO), the power supply low-pass
23 filter (FI) consists of an inductive component (L) located in
24 the respective line conductor (NL) and a capacitor
25 arrangement (C1; C2; C3) located between at least one end of
26 the relevant inductive component (L) and the ground conductor
27 (NO).

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29 [003] The circuit configuration according to claim 2,
30 characterized in that the capacitor arrangement (C1; C2, C3)
31 consists of a single capacitor (X capacitor) (C1) which
32 connects the end of the inductive component (L) on the power
33 supply unit side to the ground conductor (NO) of the AC power
34 supply line system (PL) and a series circuit of two

1 capacitors (Y capacitors) (C2, C3) connected in parallel to
2 this single capacitor (C1), whose common connection point is
3 connected to the ground connection of the relevant power
4 supply unit (PS).

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6 [004] The circuit configuration according to claim 2 or
7 claim 3, characterized in that an ohmic resistor (R) is
8 connected in parallel to the capacitor arrangement (C1; C2;
9 C3).

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11 [005] The circuit configuration according to any one of
12 claims 2 to 4, characterized in that respectively one winding
13 (W1; W2) of a current-compensated choke (DR) is inserted in
14 the conductor sections of the power supply low pass filter
15 (FI) connected to the respective line conductor (NL) and the
16 ground conductor (NO) of the AC power supply line system
17 (PL).

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1 NEW CLAIMS

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3 1. A circuit configuration for the transmission of data
4 signals from and/or to household appliances between a first
5 transceiver device and a second transceiver device via an AC
6 power supply line system within a transmission frequency
7 range which lies above the frequency of the AC power supply,
8 wherein the respective transceiver contains a power supply
9 unit whose input circuit is connected to the AC power supply
10 line system via a power supply low pass filter, characterized
11 in that the power supply low-pass filter (FI) which is
12 arranged in the input circuit of the power supply unit (PS)
13 is provided with an impedance curve such that the impedance
14 (Z_{fi}) thereof in said transmission frequency range has a
15 value that is at least twice as high as the impedance (Z_n) of
16 the AC power supply line system (PL) in said transmission
17 frequency range.

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19 2. The circuit configuration according to claim 1,
20 characterized in that in an AC power supply line system (PL)
21 comprising at least one current-carrying line conductor (LN)
22 and an ground conductor (NO), the power supply low-pass
23 filter (FI) consists of an inductive component (L) located in
24 the respective line conductor (NL) and a capacitor
25 arrangement (C1; C2; C3) located between at least one end of
26 the relevant inductive component (L) and the ground conductor
27 (NO).

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29 3. The circuit configuration according to claim 2,
30 characterized in that the capacitor arrangement (C1; C2, C3)
31 consists of a single capacitor (X capacitor) (C1) which
32 connects the end of the inductive component (L) on the power
33 supply unit side to the ground conductor (NO) of the AC power
34 supply line system (PL) and a series circuit of two

1 capacitors (Y capacitors) ((C2, C3) connected directly in
2 parallel to this single capacitor (C1), whose common
3 connection point is connected to the ground connection of the
4 relevant power supply unit (PS).

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6 4. The circuit configuration according to claim 2 or claim
7 3, characterized in that an ohmic resistor (R) is connected
8 in parallel to the capacitor arrangement (C1; C2; C3).

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10 5. The circuit configuration according to any one of claims
11 2 to 4, characterized in that respectively one winding (W1;
12 W2) of a current-compensated choke (DR) is inserted in the
13 conductor sections of the power supply low pass filter (FI)
14 connected to the respective line conductor (NL) and the
15 ground conductor (NO) of the AC power supply line system
16 (PL).